Wei-Hsiang Sun

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Education

National Chengchi University — **Taipei, Taiwan**
B.B.A. Finance — *Sep 2018 – Feb 2023*
- GPA (cumulative): 4.29/4.3

National Chengchi University — **Taipei, Taiwan**
B.B.A. Statistics — *Sep 2018 – Feb 2023*
- GPA (cumulative): 4.29/4.3

University of California, Berkeley — **Berkeley, CA**
Berkeley International Study Program - Mathematics & Statistics — *Aug 2021– May 2022*
- GPA: 3.95/4.0

Awards and Honors

Study Abroad Scholarship – Ministry of Education	Aug 2021
Student Research Scholarship – Ministry of Science and Technology	Feb 2021 – July 2021
Academia Sinica Institute of Statistical Science Research Scholarship	Sep 2020 – July 2021
National Chengchi University Presidential Award – 6 times	Fall 2018 – July 2021
Lung-Shan Temple Scholarship – 2 times	Fall 2019 & Fall 2020

Research Experience

Student Researcher — **Taipei, Taiwan**
Supervisor: Dr. Frederick Kin Hing Phoa — *July 2020 – July 2021*
(*Institute of Statistical Science, Academia Sinica*)
- Surveyed and summarized research papers in community detection
- Wrote out the community detection algorithm proposed by Dr. Phoa in python.
- Conducted simulations on synthetic benchmarks and real-life datasets.
- Summarized and visualized the results from simulation.

Student Researcher — **Taipei, Taiwan**
Supervisor: Dr. Chia-Hui Huang — *Feb 2021 – July 2021*
(*National Chengchi University, Dept. of Statistics*)
- Conducted supervised dimension reduction on the Obstructive Sleep Apnea (OSA) data set.
- Proposed a dimension reduction pipeline, using modified discrete bat algorithm based on AIC criteria and stepwise feature selection based on p-value criteria.
- The proposed dimension reduction pipeline achieved better error rate on the test set compared to merely using the bat algorithm or stepwise feature selection.

Projects

Genetic Algorithm R Package — **Berkeley, CA**
Intro to Statistical Computing Final Project — *Fall 2021*

- Collaborated with 2 statistics MA students to create a genetic algorithm R package.
- Wrote the mutation function, fitness function, and combined the functions written by teammates into a wrapper function. Wrote tests to ensure function input and output is as expected.

Econometric Paper Replication and Reanalysis **Berkeley, CA**
Causal Inference Final Project *Fall 2021*

- Reanalyzed the paper "How effective are public policies to increase health insurance coverage among young adults?"
- Performed sensitivity analysis and applied causal estimators from observational studies and randomized experiments. Analyzed the results and potential causes of why the estimates differ from the results of the original paper.

Mendelian Randomization Literature Review **Berkeley, CA**
Experimental Design Final Project *Spring 2022*

- Compared the IVW estimator in MR context to estimators used for non-compliance in experiments.
- Reviewed paper in Mendelian Randomization (MR) and summarize modern methodologies for causal effect estimations in MR context, especially when violation of Instrumental Variable (IV) assumptions occur.
- Conducted simulations to compare estimators used in different frameworks of MR.

Fraudulence Job Posting Classification **Berkeley, CA**
Modern Statistical Prediction and Machine Learning Final Project *Spring 2022*

- Wrote functions to parse text features and clean data
- Performed cross validation to tune hyper-parameters used in variable selection and ML models such as random forests and SVM.
- The pipeline and parameter of choice achieved improved accuracy and recall compared to directly fitting ML models to the feature matrix.

Courses

Mathematics & Statistics
- Linear Algebra
- Analysis I/II
- Mathematical Statistics I/II
- Regression Analysis I
- Multivariate Analysis
- Modern Statistical Prediction and Machine Learning
- Causal Inference
- Experimental Design (graduate level)

Programming
- Programming 101 (Python)
- Programming and Statistical Software (R)
- Introduction to Statistical Computing (graduate level)

Skills

Programming: Python
Statistical Software: R
Typesetting: LaTeX
Languages: Mandarin (native), English (proficient)

Extracurriculars

Extracurricular activities: Campus Tour Guide Oct 2018 - Mar 2019

- give campus tours for international students
- led by the Office of International Programs

Citizenship: Taiwan (R.O.C.)